

**The Out Loud Assignment: Articulating Library Contributions to First-Year Student Success**

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### **Abstract**

As more and more libraries consider GPA and year-to-year retention as relevant and meaningful measures of interest, it is important to consider whether these measures are locally appropriate. Several limitations of broadly applying GPA and first-year retention as measures of student success were recently discovered while completing a large exploratory research project. The project assessed the impact of a library assignment offered to students during their first term on campus at a large public research university. Findings revealed the assignment had a greater impact on regional campus students in contrast to the larger central campus, where changes in admission requirements has created an increasingly high-performing cohort of first-year students. Other indicators which may better locally articulate library contributions to student success are needed.

### **Keywords**

Student success, undergraduates, library instruction, metacognition, retention, GPA, assessment, academic libraries, library orientation

### **Introduction**

In recent years the academic library community has strongly advocated that academic libraries provide local evidence of their measurable contributions to student success outcomes.<sup>1</sup> Several studies focused on linking usage of library materials to GPA or student retention, have emerged, following the University of Minnesota's *Library Data and Student Success* project and the University of Wollongong's *Library Cube*.<sup>2</sup> More broadly, an examination of GPAs of more than 8,000 graduates of Hong Kong Baptist University over a three year period found that students who had the opportunity to attend at least three library instructional workshops had higher GPAs.<sup>3</sup> The more workshops a student attended throughout his or her academic career, the more significant the correlation. Another study of whether the use of specific library services, including library instruction, by first-year students influenced academic achievement and retention found that enrollment in the libraries' Intro to Library Research I and Intro to Library Research II courses did correlate with higher student GPA.<sup>4</sup> A positive correlation between library instruction and first-year GPA and retention to the second-year was also reported in a study at Middle Tennessee State University.<sup>5</sup>

As more and more libraries consider GPA and year-to-year retention as relevant and meaningful measures of interest, it is important to consider whether practically speaking it is appropriate to locally apply these measures. Not all library activities can or should be connected to a change in these metrics. After completing a large exploratory research project, some limitations of broadly applying GPA and first-year retention as measures of student success were recently discovered. Specifically, the project assessed the impact of a redesigned library assignment offered to students during their first term on campus at The Ohio State University through a one-credit orientation course taught by

academic advisors. The study questioned whether students who completed the library assignment had a higher GPA than those who did not and persisted to the subsequent year at a higher rate.

### **Background**

Ohio State is a large, multi-campus, research intensive, land-grant university, with a main campus in Columbus, Ohio featuring competitive undergraduate admission. Five additional regional campuses in Lima, Mansfield, Marion, Newark, and the Agricultural Technical Institute in Wooster, OH offer open admission to Ohio's high school graduates. Undergraduate enrollment at the Columbus campus was 45,289 in the fall of 2015 and 44,741 in the fall of 2014. Undergraduate enrollment at all 5 regional campuses combined was 6,470 in the fall of 2015 and 6,474 in the fall of 2014.<sup>6</sup>

In 2014 University Libraries overhauled a library assignment offered to academic advisors teaching survey courses required of students during their first term on campus. The previous assignment, known as Make the Leap, walked students through four different research databases/indexes, including Google, by means of a series of guiding questions in effort to increase students' knowledge of different databases and increase skills in searching. Students complained that this assignment was boring and instructors expressed concerns that the assignment was not helping students learn to find the information they needed. The new assignment was named Out Loud and focused on the transition to college instead of specific library and information skills. The assignment was intended to support advisor's instructional efforts as they orient students to the college experience. Advisors must elect to incorporate the assignment into their survey course and the assignment is available on both the Columbus and regional campuses.

The Out Loud assignment applied findings of multiple Project Information Literacy (PIL) reports, which found that students struggled with finding, evaluating and using information, yet tended to overestimate their own research skills.<sup>7</sup> Typically, students had no difficulty locating information, but were overwhelmed with the sheer volume of the information they found, its value, and how to use information in complex situations and apply higher order thinking skills. In addition, while students often struggled with their transition to college, many tacitly believe that being in college means being self-reliant. Consequently, they may shy away from asking for help when it's most needed. Local conversations with academic advisors revealed that Ohio State students regularly struggled with help-seeking, confirming the PIL findings.

To address this, the libraries' Teaching and Learning department took a holistic approach to overhaul the survey assignment. Guided by Carol Kuhlthau's Information Search Process model and supporting research, they incorporated cognitive, emotional and behavioral elements into the activity.<sup>8</sup> The goal was to assist students in their first term on campus with learning strategies for seeking help and identifying resources for both personal and academic needs. This approach was grounded in the disposition of metacognition, the "ability to know what we know and what we don't know,"<sup>9</sup> provides a conscious awareness of self in relation to the task and environment. Metacognitive capabilities, thinking about one's own thinking, are at the heart of college readiness.<sup>10</sup> Metacognition allows students to observe, assess, and value the content of their own thinking, emotions, and behaviors, deepening their capacity to learn. The three module Out Loud assignment attempts to make this process explicit by making students aware of their own thinking using a mindfulness assessment in

the first module and by articulating the thinking and feeling aspects of common information-based scenarios in the remaining two modules. More specifically, the first module – Self Awareness – introduces the idea of metacognition and mindfulness, invites students to take the Mindfulness Attention Awareness Scale assessment, and concludes asking students to explore some of the nine short (approximately one minute in length) videos of students sharing stories of challenges they faced as first-year students.<sup>11</sup> The second module – Campus Information – focuses on information-seeking tasks related to university business and student life and presents three scenarios of a student with an information-based challenge and asks the student taking the assignment to select from among a variety of next steps. The scenarios include descriptions of what the student is thinking and feeling in addition to the issue itself in order to normalize the negative emotions that are present in solving information challenges. The third module – Research – focuses on the different stages of the research process and like the Campus Information module, also presents three scenarios of a student with an information-based challenge with descriptions of what the student is thinking and feeling, and asks the student taking the assignment to select from among a variety of next steps. Brief quizzes of 2-3 questions between each module encourage reflective thinking. Students get credit for completing the assignment when they answer the final quiz question; the assignment is graded for completion only. Further information about the assignment, including preview access information, is in Appendix A.

The purpose of these activities is to normalize the strong emotions students experience when they encounter, often for the first time, the difficult thinking and feeling aspects of the research process and of help-seeking in general. The assignment is named Out Loud to reflect that it speaks “out loud” these often invisible elements of information seeking and in doing so notes that these challenges are normal and expected parts of the transition to college.

## **Methods**

To examine whether students whose advisors assigned Out Loud had a higher GPA than those with advisors who did not assign Out Loud, and to determine whether these same students persisted to the subsequent year at a higher rate, the authors collected a list of all students who received and completed the assignment during fall semesters 2014 and 2015.<sup>12</sup> This list was then matched to a list of students first admitted during fall semester 2014 and 2015 who were also enrolled in the university during fall semester 2015 and 2016 by harvesting data from the university’s student information system. This second list included cumulative GPA, college, major, academic rank, academic status, and campus. Students who elected to withhold directory information via FERPA and students who were under 18 years of age when first enrolled were excluded from the query. The two lists were then blended in Microsoft Access using a unique identifier, and any identifying information was stripped. The cleaned data was then imported into SPSS and Tableau for analysis.

Independent *t*-tests were run to compare the cumulative GPA of students whose advisors assigned Out Loud in contrast to students not assigned Out Loud, by academic rank, campus, and college. Retention for Columbus and regional campus students was also calculated. Results were then visualized to emphasize differences by academic level and college and to facilitate the communication and sharing of the data with decision-makers throughout the university.

## **Results**

In total 3,384 students were assigned Out Loud on the Columbus and regional campuses during fall semester 2014 and 2,536 students during fall semester 2015. (Tables 1 and 2) Regional campus advisors were more likely to incorporate Out Loud into their survey course curriculum, with 1,566 (60.0%) campus students receiving the assignment in 2014 and 1,156 (43.0%) in 2015. In contrast, on the Columbus campus, only 1,818 (19.1%) students received the assignment in 2014 and 1,380 (13.9%) students in 2015. (Figure 1) This may reflect the differences in mission and focus of the different campuses. Regional campuses in particular, with open enrollment, emphasize small class sizes and more personalized instruction. The Columbus campus offers more competitive, high-enrollment, specialized majors.

[Insert **Table 1.** Difference in GPA, Students Assigned Out Loud and Students Not Assigned Out Loud, By Academic Rank, Campus, and College (Admitted Fall 2014)]

[Insert **Table 2.** Difference in GPA, Students Assigned Out Loud and Students Not Assigned Out Loud, By Academic Rank, Campus, and College (Admitted Fall 2015)]

[Insert **Figure 1.** Advisors on Regional Campuses Were More Likely to Assign the Out Loud to Students Who First Enrolled in Either Fall 2014 or Fall 2015]

In 2014, a statistically significant difference in GPA was determined between students assigned Out Loud and students not assigned Out Loud on the Columbus ( $p=.001$ ) and regional campuses ( $p<=.000$ ). (Figure 2) The same difference was observed among regional campus students in 2015 ( $p<-.000$ ), while no difference was observed for all Columbus campus students in 2015 ( $p=.057$ ).

[Insert **Figure 2.** Average GPA of Students Assigned Out Loud and Students Not Assigned Out Loud, by Academic Rank and Campus (Black represents  $p\leq 0.05$ ,  $t\geq 0$ )]

During their first term on campus, the majority of students either enroll directly in a college major, or are designated undecided or exploring. It is of note that in 2014, 68.2% ( $n=2558$ ) of students with majors listed in the College of Arts & Sciences, 97.0% ( $n=1537$ ) in the College of Business, 66.9% ( $n=1166$ ) in the College of Engineering, and 71.7% ( $n=1616$ ) in the university's exploration program were not exposed to the Out Loud library assignment during their survey course experience. (Figure 3) In 2015, 77.5 % ( $n=2952$ ) of students with majors listed in the College of Arts & Sciences, 96.4% ( $n=1534$ ) in the College of Business, 74.1% ( $n=1333$ ) in the College of Engineering, and 80.0% ( $n=1865$ ) in the university's exploration program were not exposed.

[Insert **Figure 3.** Number of Students Assigned Out Loud, By College]

In contrast, more than three quarters (77.4%, n=536) of students enrolled in majors listed in the College of Food, Agricultural, and Environmental Sciences (FAES) received the assignment in 2014 and 44.7% (n=344) in 2015. In both 2014 and 2015, FAES students whose advisors elected to include the assignment in their survey courses had a significantly higher GPA than peers with majors listed in the same college who did not receive the assignment (2014  $p=.026$ ; 2015  $p\leq .000$ ) (Figure 4). This is the only college with significant findings for both years of this study. Significant differences were observed in other colleges for a single year, including the College of Arts and Sciences in 2014 ( $p\leq .000$ ), the university's exploration program in 2015 ( $p=.025$ ), and the College of Engineering in 2015 ( $p\leq .000$ ).

[Insert **Figure 4.** Average GPA of Students Assigned Out Loud and Students Not Assigned Out Loud, by College\* ( $p\leq 0.05$ ,  $t\geq 0$ )]

Students assigned Out Loud on the Columbus campus were retained to the following academic year at a rate of 93.7% (n=1736) in 2014, and 94.5% (n=1298) in 2015 respectively. (Table 3) Conversely, students not assigned Out Loud were retained at a rate of 82.7% (n=6643) in 2014 and 90.4% (n=7121) in 2015. Retention for regional campus students was markedly lower for both students who were assigned Out Loud and students who were not assigned Out Loud. Only 76.7% (n=1246) of students who completed the assignment were retained in 2014 and 78.8% (n=915) in 2015. Regional campus locations offer a limited number of programs, including bachelor degrees in English, History, and Social Work. Most regional campus students complete one to three years of coursework that may be applied towards one of the university's 200+ majors. Students may then change to the Columbus campus after earning 30 credits, however, acceptance to select majors in the Colleges of Business, Engineering, and other units remains competitive.<sup>13</sup>

[Insert **Table 3.** Retention Rate for Students Assigned Out Loud and Students Not Assigned Out Loud (by campus, 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> year students only)]

## **Discussion**

Much work is needed to demonstrate the value of the Out Loud assignment to advisors who will decide to incorporate the assignment into their survey course, particularly in the university's exploration program, and the Colleges of Arts & Sciences, Business, and Engineering. As the university has made a focused effort to improve the institution's ranking on common rating lists, the incoming first-year class is increasingly high performing. On the Columbus campus alone, where admission is competitive, the 2015 first-year class had an average ACT composite score of 28.9; 61.9% of these students graduated in the top 10 percent of their high school class and 95.0% graduated in the top 25%.<sup>14</sup> In the fall of 2016, it was announced that the retention rate for this select group of students was 94.2%, leading the authors of the study to question whether retention remains a relevant metric for assessing the impact of a library initiative on the Columbus campus.<sup>15</sup> To improve the 2015 retention rate on the Columbus campus of Ohio State just one percent, the university would need to retain 65-70 more students in a class which started with a cohort of 7,023 students.

Ohio State's regional campuses offer an alternative path for resident high school students who desire to attend the university, but whose profile is not as competitive. In 2015, regional campus students had an average ACT composite score of 22.0. Fewer than 10% of regional campus students graduated in the top 10 percent of their high school class, and only 23-33% of students across all regional campuses graduated within the top 25%.<sup>16</sup> With this profile regional campus students are more likely to struggle adjusting to and remaining in college. Students on regional campuses who were assigned Out Loud during their first term on campus did have a statistically significant higher GPA than students who were not, and were more likely to be retained to the subsequent year, suggesting that Out Loud may indeed contribute to facilitating regional campus students' transition to college. Thus marketing the Out Loud assignment to advisors on regional campuses may have the greatest potential impact.

With increasing pressure to include more and more content in the survey course, increasing advisor uptake of the Out Loud assignment will be difficult. Marketing alone will not suffice. Some advisors have discontinued using Out Loud in recent years to make room for university required content, such as sexual civility training, and topics related to campus safety and personal wellness. Ohio State's librarians must continue to develop and maintain personal relationships with academic advisors to promote the utility of the assignment in facilitating students' transition to college, increasing students' comfort in seeking help, and aiding their understanding of the research process. The findings of this study provide evidence for librarians to share with advisors, when advocating for inclusion of the Out Loud assignment in an advisor's survey course. This study, in particular, revealed that when the majority of students on a campus, or within a college received the assignment, these students had a significantly higher GPA than their peers who did not receive the assignment.

The authors, on completion of this study acknowledge a few limitations of broadly applying GPA and first-year retention as measures of student success. Specifically, teasing out a library's contribution to student GPA and retention at institutions with select admissions and highly performing incoming classes may not significantly advance a library's impact narrative. Many incoming first-year Ohio State students have successfully completed advanced placement courses or participated in Ohio's College Credit Plus program, which allow students to earn high school and college credits simultaneously. Several students enter the university as first year students with an academic rank of sophomore.<sup>17</sup> This complicates both the harvesting, analysis, and interpretation of GPA data in relation to a specific library initiative. These, and other challenges, such as examining retention at a university with regional campuses, and transfer agreements with several community colleges, illustrate a need to identify other measures which might be more useful in articulating the value of library instruction and libraries.<sup>18</sup> Other limitations directly relate to the study design itself. Students were not randomly separated into cohorts which received the assignment and did not receive the assignment. Culturally at Ohio State, instructors decide to use a library designed assignment in their class. Since instructors self-select to use this assignment, we recognize further potential student limitations as there are likely other factors which influence improved student success which do not reflect the assignment itself.

Connecting academic libraries to factors associated with student success identified in the higher education literature offer possibilities. George Kuh and associates have identified student engagement as critical. Student engagement consists of two factors; one is the time and effort

students devote to educationally sound activities inside and outside the classroom” and the second is “the ways the institution allocates resources and organizes learning opportunities and services to induce students to take part in these activities.”<sup>19</sup> While these factors may be very difficult to measure, looking to information gathered through broad institutional surveys offers one possibility. A recent study linked multiple forms of library use to measures of academic engagement and engagement in scholarly activities as measured by the Student Experience in the Research University, a multi-institutional survey.<sup>20</sup>

Student engagement studies have identified institutional conditions associated with student success, including collaborative relationships with faculty outside of class, active learning, and peer support.<sup>21</sup> Peer support likely takes place in the library, where the environment is conducive to students engaging in scholarly pursuits. Students participating in one Project Information Literacy study on student use of technology in libraries reported that they actively sought the library as a refuge from distractions. Specifically, in the library students “felt ‘studious,’ ‘contemplative,’ and ‘productive,’” in part due to the proximity of fellow students engaged in “hard work”, which was contagious to them.<sup>22</sup> Further work to articulate this connection of the library to peer support is needed.

Articulating library contributions to the ten high-impact educational practices identified by Kuh’s research is another potential measure.<sup>23</sup> Librarians often work regularly in these areas, especially in first-year experience programs, writing-intensive courses, and capstone courses and projects. The challenge is in how to measure the impact of those efforts. A recent study in this area explored the extent to which five of the high-impact educational practices included the integration of information literacy competencies.<sup>24</sup>

Lastly, VanderPol, Brown and Iannuzzi argue that the library serves as bridge between the curricular and co-curricular.<sup>25</sup> With contacts across disciplines, librarians are in a unique position to nurture institutional collaborations between student affairs and academic affairs, creating conditions leading to student success. Mechanisms that measure the outcomes of library bridge building may better provide evidence of and articulate the value of academic libraries’ contributions to student success.

## **Conclusion**

Institutional context matters significantly. The metrics used to articulate library contributions to student success must reflect institutional profile and institutional priorities. GPA and student retention are two metrics heavily advocated by the academic library community for articulating the value of the academic library. This study did find a correlation between completion of Out Loud and increased GPA, as well as student retention to the second year; but also discovered that GPA and student retention may not always be the most appropriate measure for communicating a library’s impact. Moving forward, the authors will incorporate study findings into promotional materials marketing Out Loud to advisors on regional campuses, and to advisors working in Columbus campus colleges where uptake of the assignment was low. The authors will also continue to seek other indicators which may better locally articulate library contributions to student success.

## **References**



1. Megan Oakleaf, "The Value of Academic Libraries: A Comprehensive Research Review and Report," Chicago, IL: Association of College and Research Libraries, 2010, [http://www.ala.org/acrl/sites/ala.org.acrl/files/content/issues/value/val\\_report.pdf](http://www.ala.org/acrl/sites/ala.org.acrl/files/content/issues/value/val_report.pdf); Association of Research Libraries, "ACRL Value of Academic Libraries," February 6, 2017, <http://www.acrl.ala.org/value/?cat=5>.
2. University of Minnesota's *Library Data and Student Success* projects, <http://librarydatastudentsuccess.blogspot.com/>, and the University of Wollongong's *Library Cube*. <http://er.educause.edu/articles/2012/7/discovering-the-impact-of-library-use-and-student-performance>
3. Wong, Shun Han Rebekah, and Dianne Cmor. "Measuring Association between Library Instruction and Graduation GPA." *College & Research Libraries* 72.5 (2011): 464–473.
4. Soria, Krista M., Fransen, Jan, and Nackerud, Shane. "Library use and undergraduate student outcomes: New evidence for students' retention and academic success." *portal: Libraries and the Academy* 13.2 (2013): 147-164.
5. Vance, Jason M., Rachel Kirk, and Justin G. Gardner. "Measuring the impact of library instruction on freshman success and persistence." *Communications in Information Literacy* 6, no. 1 (2012): 49-58.
6. The Ohio State University, *Historical OSU Statistical Summary, 2011-2016*. [https://www.osu.edu/osutoday/Historical OSU Statistical Summary 2011-2016.xls](https://www.osu.edu/osutoday/Historical_OSU_Statistical_Summary_2011-2016.xls)
7. Head, Alison J. and Michael B. Eisenberg. 2010. "Truth Be Told: How College Students Evaluate and Use Information in the Digital Age," Project Information Literacy Progress Report. November 1, 2010. [http://www.projectinfolit.org/uploads/2/7/5/4/27541717/pil\\_fall2010\\_survey\\_fullreport1.pdf](http://www.projectinfolit.org/uploads/2/7/5/4/27541717/pil_fall2010_survey_fullreport1.pdf) ; Head, Alison J. "Learning the Ropes: How Freshmen Conduct Course Research Once They Enter College," Project Information Literacy Research Report. December 5, 2013. [http://www.projectinfolit.org/uploads/2/7/5/4/27541717/pil\\_2013\\_freshmenstudy\\_fullreportv2.pdf](http://www.projectinfolit.org/uploads/2/7/5/4/27541717/pil_2013_freshmenstudy_fullreportv2.pdf) ; Ohio State was one of the institutions involved in both of these studies; author Elizabeth L Black was a member of the research team on the 2013 study.
8. Kuhlthau, Carol Collier. *Seeking Meaning: A Process Approach to Library and Information Services*. 2<sup>nd</sup> edition. Westport, CT: Libraries Unlimited, 2004.
9. Costa, Arthur L. and Bena Kallick. *Dispositions: Reframing teaching and learning*. Thousand Oaks, CA: Corwin, 2014, 55.
10. Conley, David T. "Rethinking college readiness." In *The first year and beyond: Rethinking the challenge of collegiate transition*, edited by Betsy O. Barefoot, 3-13; *New Directions for Higher Education*, no 144, winter 2008, San Francisco: Jossey-Bass.
11. MAAS: Brown, K.W. & Ryan, R.M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology*, 84, 822-848.
12. This study was reviewed by the Ohio State University Office of Responsible Research Practices and determined exempt from IRB review.
13. Office of Enrollment Services, The Ohio State University. "Regional Campuses: Your Future Starts Here." *Undergraduate Admissions*. <https://undergrad.osu.edu/regional-campuses/right-fit>. Note: A student who begins his or her academic career on an Ohio State regional campus

and then switches to the Columbus campus is defined by the university as a campus change, rather than a transfer student.

14. Office of Enrollment Services, Ohio State University. *New first year student profile by campus, 2007-2016*. [http://oesar.osu.edu/pdf/admissions/OSU\\_NewFreshmenProfileByCampus.pdf](http://oesar.osu.edu/pdf/admissions/OSU_NewFreshmenProfileByCampus.pdf).
15. Office of Enrollment Services, Ohio State University. *Retention and graduation rates for NFYS (2006-2015)*. [https://oesar.osu.edu/pdf/grad\\_rates/Retention\\_byCampus\\_ALL.pdf](https://oesar.osu.edu/pdf/grad_rates/Retention_byCampus_ALL.pdf); Ohio State is now one of the top-gaining four-year public institutions in improving student retention and graduation rates according to Education Trust. *Rising tide: Do college grad rate gains benefit all students?* December 2015. <https://edtrust.org/wp-content/uploads/2014/09/TheRisingTide-Do-College-Grad-Rate-Gains-Benefit-All-Students-3.7-16.pdf>
16. Office of Enrollment Services, Ohio State University. *New first year student profile by campus, 2007-2016*. [http://oesar.osu.edu/pdf/admissions/OSU\\_NewFreshmenProfileByCampus.pdf](http://oesar.osu.edu/pdf/admissions/OSU_NewFreshmenProfileByCampus.pdf).
17. Ohio Department of Education. *College Credit Plus*. <http://education.ohio.gov/Topics/Quality-School-Choice/College-Credit-Plus>.
18. State policy for transferring among state colleges is described well at Columbus State Community College. *Transfer Programs*. <http://www.csccl.edu/academics/transfer/>
19. .Kuh, George D. "What We're Learning About Student Engagement from NSSE." *Change*, 35, no. 2 (2003): 24-32.; Kuh, George D., Jillian Kinzie, John H. Schuh, Elizabeth J. Whitt, and Associates. *Student Success in College: Creating Conditions that Matter*. San Francisco: Jossey-Bass, 2005, 9.
20. Soria, Krista, Fransen, Jan, and Nackerud, Shane. "Beyond Books: The Extended Academic Benefits of Library Use for First-Year College Students," *College & Research Libraries*, 78 no.1 (April 2017). <http://crl.acrl.org/index.php/crl/article/view/16564>
21. Kuh et al. "Piecing Together the Student Success Puzzle."
22. Head and Eisenberg, "Truth Be Told."
23. Kuh, George D. *High-Impact Educational Practices: What They Are, Who Has Access to Them, and Why They Matter*. Association of American Colleges and Universities, 2008.
24. Riehle, Catherine Fraser and Sharon A. Weiner. "High-Impact Educational Practices: An Exploration of the Role of Information Literacy," *College & Undergraduate Libraries*, 20, no. 2 (2013): 127-143.
25. VanderPol, Diane, Jeanne M. Brown, and Patricia Iannuzzi. "Reforming the undergraduate experience." *New Directions for Teaching and Learning* 2008, no. 114 (2008): 5-15.

## Appendix A: Out Loud: The Library Assignment

The instructor preview of the interactive online assignment is available at the time of writing at <http://liblearn.osu.edu/outloud/>. Move through the three modules and associated quiz previews with links at the bottom of each page. The assignment itself is delivered to students in the learning management system.

PDF versions of the assignment are available at <http://hdl.handle.net/1811/80913>.

## Tables and Figures

**Table 1.** Difference in GPA, Students Assigned Out Loud and Students Not Assigned Out Loud, By Academic Rank, Campus, and College (Admitted Fall 2014)

	Assigned Out Loud				Not Assigned Out Loud						
	<i>n</i>	M	SD	SE of Mean	<i>n</i>	M	SD	<i>SE of Mean</i>	<i>t</i>	<i>df</i>	<i>p</i>
<u>By Academic Rank, Columbus Campus</u>											
All levels	1818	3.23	0.56	0.01	7718	3.18	0.63	0.01	3.258	3024	.001
1 <sup>st</sup> year students	560	3.08	0.56	0.02	2523	3.15	0.62	0.01	-2.658	3081	.008
2 <sup>nd</sup> year students	967	3.28	0.53	0.01	3228	3.21	0.61	0.01	3.288	1778	.001
3 <sup>rd</sup> year students	248	3.39	0.54	0.03	1411	3.15	0.69	0.02	6.025	401	.000
4 <sup>th</sup> year students	43	3.23	0.68	0.10	556	3.21	0.67	0.03	.191	597	.849
<u>By Academic Rank, Regional Campuses</u>											
All levels	1566	2.83	0.79	0.02	1042	2.58	0.10	0.03	6.791	1876	.000
1 <sup>st</sup> year students	1355	2.79	0.81	0.02	798	2.45	1.04	0.04	8.085	1364	.000
2 <sup>nd</sup> year students	183	3.09	0.61	0.44	157	3.01	0.73	0.06	1.085	304	.279
3 <sup>rd</sup> year students	20	2.85	0.89	0.20	56	2.99	0.70	0.09	-0.698	74	.487
4 <sup>th</sup> year students*											
<u>By College</u>											
Arts & Sciences	1194	3.16	0.67	0.02	2558	3.05	0.75	0.01	4.554	2569	.000
Business	47	3.32	0.44	0.06	1537	3.34	0.55	0.01	-0.293	1582	.769
Dentistry	14	3.22	0.58	0.15	78	3.20	0.67	0.08	0.123	90	.903
Education & Human Ecology	172	3.10	0.75	0.06	627	3.09	0.72	0.03	0.203	797	.839
Engineering	579	3.17	0.54	0.02	1166	3.16	0.57	0.02	0.519	1743	.604
Exploration Program	639	2.75	0.82	0.03	1616	2.86	0.83	0.02	-2.888	2253	.004
Food, Agricultural & Environmental Sciences	536	2.90	0.69	0.03	156	2.74	0.85	0.07	2.239	217	.026
Health & Rehabilitation Sciences	39	3.11	0.73	0.12	599	3.22	0.56	0.02	-1.152	636	.366
Nursing*											
Public Affairs*											
Public Health	23	3.52	0.37	0.08	16	3.47	0.38	0.10	0.436	37	.666
Pharmacy*											
Social Work	57	3.10	0.67	0.09	73	3.05	0.83	0.10	0.329	128	.743

\*n<10

**Table 2.** Difference in GPA, Students Assigned Out Loud and Students Not Assigned Out Loud, By Academic Rank, Campus, and College (Admitted Fall 2015)

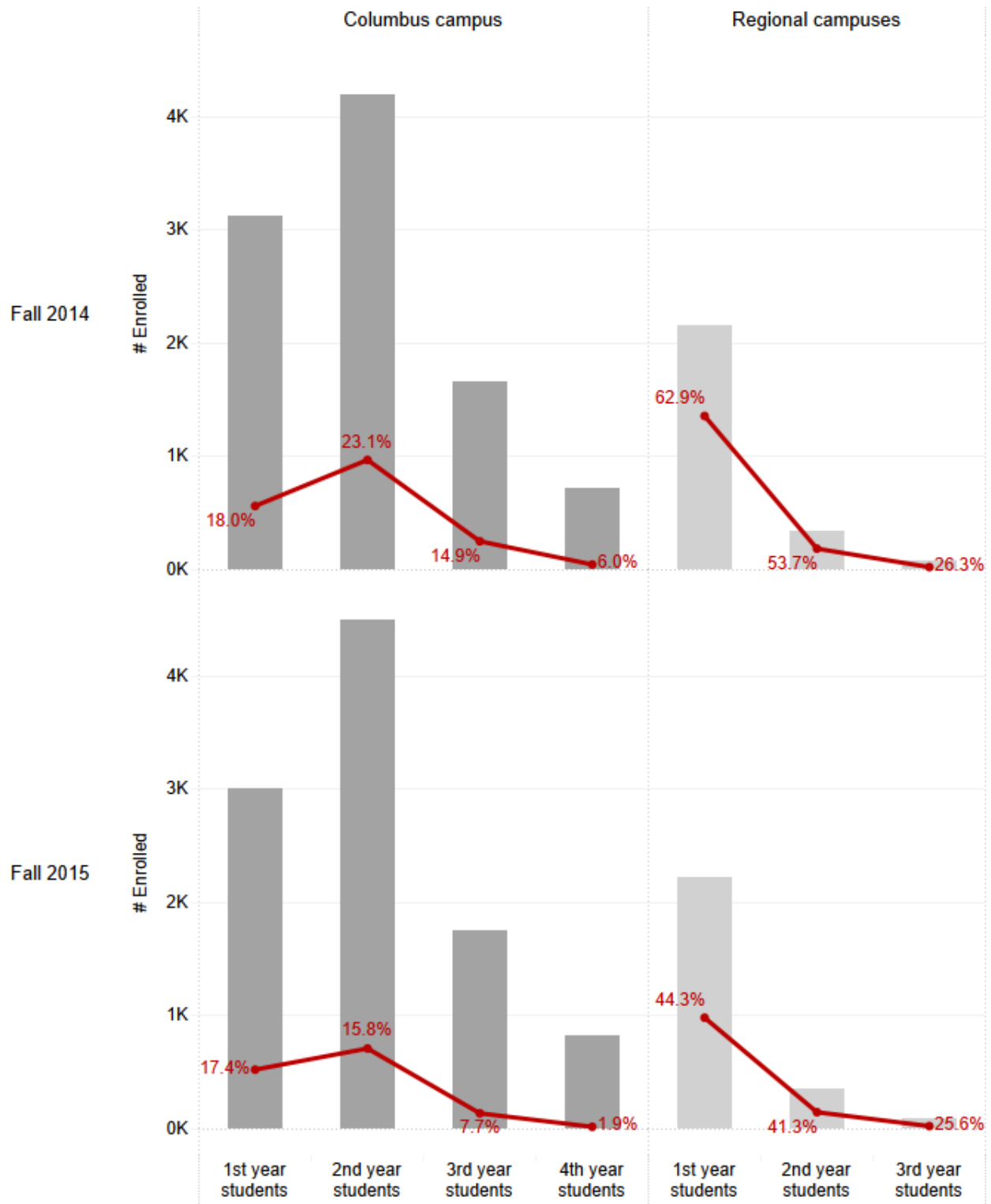
	Assigned Out Loud				Not Assigned Out Loud						
	<i>n</i>	M	SD	SE of Mean	<i>n</i>	M	SD	<i>SE of Mean</i>	<i>t</i>	<i>df</i>	<i>p</i>
<u>By Academic Rank, Columbus Campus</u>											
All levels	1380	3.22	0.55	0.01	8518	3.19	0.66	0.01	1.903	2077	.057
1 <sup>st</sup> year students	521	3.07	0.57	0.02	2437	3.11	0.67	0.01	-1.324	860	.186
2 <sup>nd</sup> year students	708	3.29	0.51	0.02	3780	3.25	0.63	0.01	1.749	1164	.081
3 <sup>rd</sup> year students	135	3.43	0.57	0.05	1611	3.17	0.70	0.02	5.069	171	.000
4 <sup>th</sup> year students	16	3.18	0.64	0.16	690	3.17	0.63	0.02	0.063	704	.950
<u>By Academic Rank, Regional Campuses</u>											
All levels	1156	2.90	0.81	0.02	1533	2.51	0.97	0.02	11.398	2661	.000
1 <sup>st</sup> year students	980	2.84	0.82	0.03	1232	2.38	0.97	0.03	12.013	2201	.000
2 <sup>nd</sup> year students	145	3.27	0.62	0.05	206	3.04	0.74	0.05	3.084	338	.002
3 <sup>rd</sup> year students	22	3.27	0.57	0.12	64	3.03	0.88	0.11	1.222	84	.225
4 <sup>th</sup> year students*											
<u>By College</u>											
Arts & Sciences	858	3.09	0.67	0.02	2952	3.07	0.77	0.01	0.801	1570	.423
Business	57	3.37	0.55	0.07	1534	3.38	0.55	0.01	-0.174	1589	.862
Dentistry	19	3.21	0.44	0.10	57	3.32	0.64	0.08	-0.678	74	.500
Education & Human Ecology	128	3.03	0.86	0.07	670	3.07	0.73	0.03	-0.439	796	.661
Engineering	467	3.22	0.56	0.03	1333	3.11	0.66	0.02	3.433	949	.001
Exploration Program	467	2.88	0.80	0.04	1865	2.78	0.87	0.02	2.244	2330	.025
Food, Agricultural & Environmental Sciences	344	2.97	0.68	0.04	426	2.72	0.87	0.04	4.356	767	.000
Health & Rehabilitation Sciences	26	3.40	0.41	0.08	646	3.21	0.52	0.02	1.848	670	0.65
Nursing*											
Public Affairs*											
Public Health	19	3.58	0.41	0.10	97	3.46	0.33	0.03	1.393	114	.166
Pharmacy	82	3.17	0.64	0.07	25	2.92	0.69	0.14	1.675	105	.097
Social Work	61	3.16	0.75	0.10	77	2.98	0.91	0.10	1.285	136	.201

\*n<10

**Table 3.** Retention Rate for Students Assigned Out Loud and Students Not Assigned Out Loud (1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> year students only)

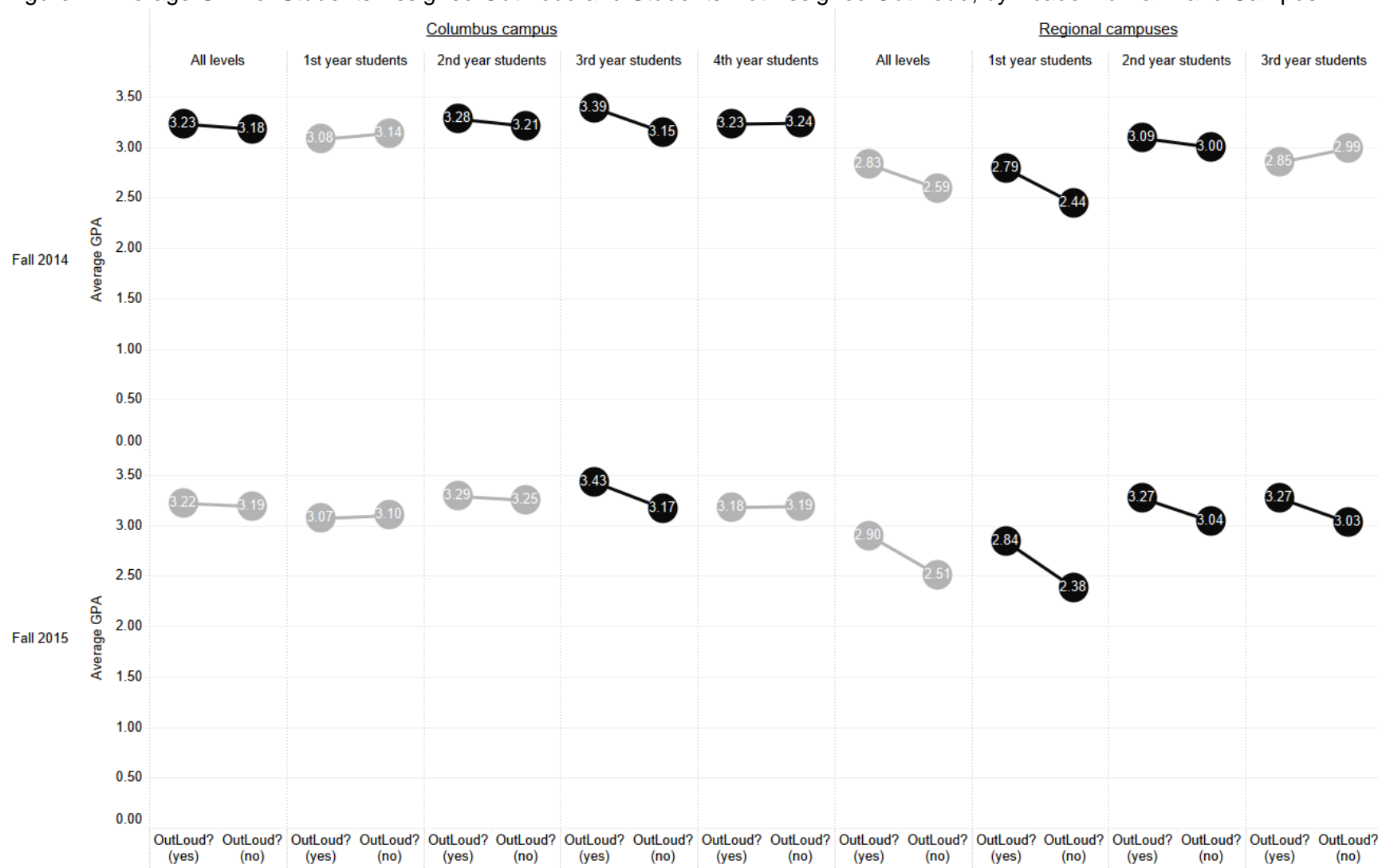
	Assigned Out Loud		Not Assigned Out Loud	
	<i>n</i>	Retention Rate	<i>n</i>	Retention Rate
<u>Columbus Campus</u>				
Fall 2014	1736	93.7%	6643	82.7%
Fall 2015	1298	94.5%	7121	90.4%
<u>Regional Campuses</u>				
Fall 2014	1246	76.7%	703	51.0%
Fall 2015	915	78.8%	1041	68.5%

**Figure 1.** Advisors on Regional Campuses Were More Likely to Assign the Out Loud to Students Who First Enrolled in Either Fall 2014 or Fall 2015



\*n<10 for Fall 2015 4<sup>th</sup> year regional campus students

Figure 2. Average GPA of Students Assigned Out Loud and Students Not Assigned Out Loud, by Academic Rank and Campus.\*



\*Black =  $p \leq 0.05$ ,  $t \geq 0$



Figure 3. Number of Students Assigned Out Loud, By College

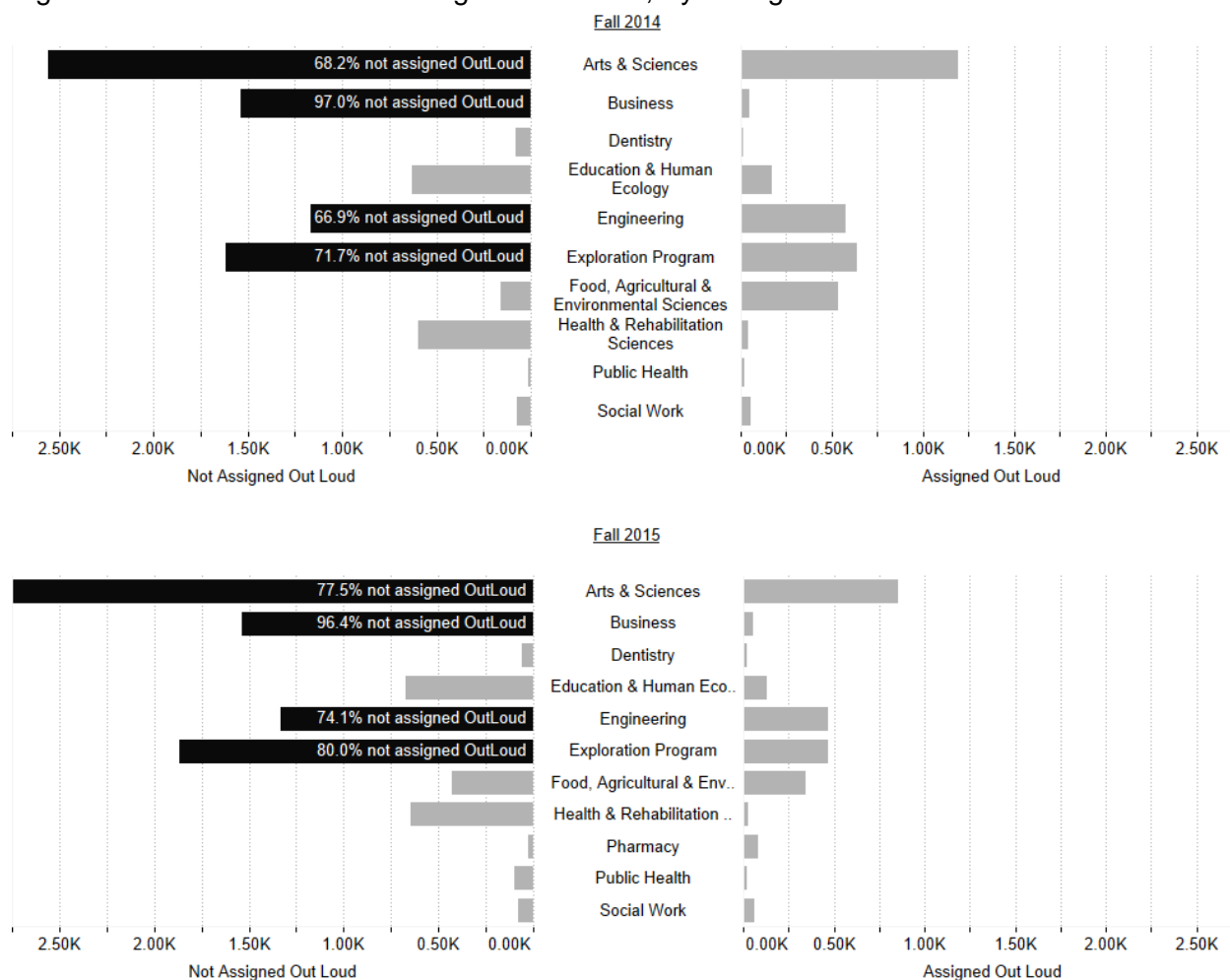


Figure 4. Average GPA of Students Assigned OutLoud and Students Not Assigned OutLoud, by College.\*

